

KALININ, V.I.; KARATAYEV, I.A.; LAPOCHKIN, I.A.

Effect of methylthiamacil on the organism of swine. Uch. zap.
VGPI 27:362-363 '62. (MIRA 16:8)

(Uracil—Swine—Feeding and feeds)

PURIM, Ya.A., kand. tekhn. nauk; LALINE, V.I., kandydat; MALASHKO, A.M.,
mladshiy nauchnyy sotrudnik

Modernized instrument for the automatic recording of the heat
resistance of fur and leather. Nauch. issl. trudy NIIMP no.12:
83-88 '63. (MIRA 17:11)

KALININ, V.I.; AVERKIN, V.D.; KLUBOV, V.A.; USANOV, N.A.

Trends in prospecting for gas- and oil-bearing structures in the Buzuluk trough and adjacent regions. Geol. nefti i gaza 7 no.11:6-13 N 463. (MIRA 17:8)

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KALININ, V.I.

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255-266 '62. (MIRA 16:8)

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(Atmospheric pressure—Physiological effect)

(Drugs—Physiological effect)

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Physiology of fowl. Uch. zap. VGPI 27:267-277 '62.

(MJRA 16:8)

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SHATILOV, I.S., kand. sel'khoz. nauk; KALININ, V.I., red.

[Combined checkrow and cluster planting of row crops; from the series "Dostizhenia nauki i peredovoi opyt v sel'skom khoziaistve."] Kvadratno-gnezdovoi posev polevykh propashnykh kul'tur; iz serii "Dostizhenia nauki i peredovoi opyt v sel'skom khoziaistve." Moskva, Izd-vo VPSH i AON pri TsK KPSS, 1959. 40 p.
(MIRA 14:12)

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KALININ, V.I.

DECEASED
c1961

1961/3

SEE ILC

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Sazonov) (Railroads--Trains)

OSIPOV, S.I.; MIRONOV, K.A.; KALININ, V.K., inzhener, redaktor; YUDZON,
D.M., tekhnicheskii redaktor

[Safety manual for electric locomotive brigades] Pamiatka po
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zhel-dor. izd-vo, 1953. 85 p. [Microfilm] (MLRA 9:8)
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VLASOV, Ivan Ivanovich; KALININ, V.K., inzhener, redaktor.

[Contact-system layout, installation and operation] Ustroistvo, montazh i
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[Work practices of electric locomotive engineers] Opyt raboty elektro-
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KHITROV, P.A., tekhnicheskii redaktor.

[Study of the traction characteristics of series VL22^m electric locomotives] Issledovanie tiagovykh svoistv elektrovosov. Serii VL22^m.
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VORONIN, Aleksey Vladimirovich; KALININ, V.K., redaktor; VERINA, G.P.,
tekhnicheskiy redaktor

[Power supply for electric railroads] Energosnabzhenie electriceskikh
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Moskva, Gos. transp. shel-dor. izd-vo, 1956. 183 p. (MLRA 9:10)
(Electric locomotives)

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VIASOV, Ivan Ivanovich; KALININ, V.K., inzh., red.; KHITROV, P.A., tekhn. red.

[Mechanical calculations for vertical chain contact suspensions]
Mekhanicheskie raschety vertikal'nykh tsepnnykh kontaktnykh podvesov.
Moskva, Gos. transp. zhel.-dor. izd-vo, 1957. 222 p. (Moscow, Vsesoiuznyi nauchno-issledovatel'skii institut shlezhnodorozhnogo transporta, Trudy, no.138). (MIRA 10:12)
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1958: 65 p.

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[Operational requirements for parameters of electric power supply systems for d.c.electric railroads] *Eksploatatsionnye trebovaniia k parametram ustroistv energosnabzheniia zheleznykh dorog, elektrifitsirovannykh na postoiannom toke. Moskva, Gos.transp.zhel-dor. izd-vo, 1959. 234 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.174).*

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Trudy MIIT no. 121:9-15 '60. (MIRA 14:4)
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MOSCOW, 1961. (MIN OF HIGHER AND SEC SPEC ED RSFSR.
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[Inspection and maintenance of the electrical machinery of
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cheskikh mashin elektropodvizhnogo sostava. Moskva, Trans-
zheldorizdat, 1962. 102 p. (MIRA 15:11)
(Electric railway motors--Maintenance and repair)

PROKHOROV, Fedor Nikitovich; BELOKRYLIN, Yu.F., inzh., retsenzent;
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TIKHONOV, Nikolay Gur'yevich; SHVETS, Yuriy Prokof'yevich; ROMASHKOV, S.G., inzh., retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; VOROTNIKOVA, L.F., tekhn. red.

[Electric relay of main line electric locomotives] Rel'e magistral'nykh elektrovozov. Moskva, Transzheldorizdat, 1963.
78 p. (MIRA 16:7)

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VETROV, N.I., inzh., retsenzent; KALININ, V.K., kand.
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[Mechanization of work and automation of systems in contact-
network maintenance] Mekhanizatsiia rabot i avtomatizatsiia
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KALININ, V.K., kand. tekhn. nauk; MIRONOV, K.A., inzh.; LEVIN, B.M., inzh.; LIEMAN, G.M., inzh.; YERSHOV, Ye.F., inzh.; PANCHENKO, P.M., inzh.; BOLYCHEV, N.G., mashinist elektrovoza; ZOLOTAREV, V.N., mashinist instruktor; YANIN, I.A., inzh.; BOVE, Ye.G., kand. tekhn. nauk, red.; USENKO, L.A., tekhn. red.

[Electric networks and maintenance of the equipment of electric locomotives] Elektricheskie skhemy i ukhod za oborudovaniem elektrovozov. [By] V.K.Kalinin i dr. Moskva, Transzheldorizdat, 1963. 279 p.

{MIRA 16:7}

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LEVASHEV, Ye.D., inzh.; ASTAF'YEV, G.K., inzh.; GURETSKIY, S.A.,
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Ye.I., inzh.; VINNICHENKO, N.G., kand. ekon. nauk, retsenzent;
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[Economics, organisation, and planning of electric transport]
Ekonomika, organizatsiia i planirovanie elektrotiagovogo kho-
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Transzheldorizdat, 1963. 286 p. (MIRA 16:9)
(Electric railroads—Management)

BENESHEVICH, I.I., kand. tekhn. nauk; OBLASYUK, V.Ya., kand. tekhn. nauk; SUKHOPRUDSKIY, N.D., kand. tekhn. nauk; SHALIMOV, M.G., kand. tekhn. nauk; BANVER, Z.M., inzh., retsenzent; KOLISH, L.G., inzh., retsenzent; NECHAYEV, N.A., kand. tekhn. nauk, retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; USENKO, L.A., tekhn. red.

[Automation and remote control in the power supply systems of electric railroads] Avtomatizatsiia i teleupravlenie ustroistvami energosnabzheniia elektricheskikh zheleznykh dorog.

[By] I.I. Beneshevich i dr. Moskva, Transzheldorizdat, 1963.
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359 p.

(Electric railroads--Current supply)

PROLYGIN, Anatoliy Petrovich; KALININ, V.K., red.; BUL'DYAYEV, N.A.,
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KALININ, V.K., kand. tekhn. nauk, red.; VASIL'YEVA, N.N.,
tekhn. red.

[Operation of VL60 electric locomotives; experience of the
Gorkiy railroad] Ekspluatatsiia elektrovovov VL60; opyt
Gor'kovskoi dorogi. Moskva, "Transport," 1964. 62 p.
(MIRA 17:2)

MIKHEYEV, V.P.; AGEYEVA, I.A.; SDVLAZHKOV, N.S.; VETROV, N.I.,
inzh., retsenzent; KALININ, V.K., kand. tekhn. nauk,
red.; MURAV'YEVA, N.D., tekhn. red.

[Decreasing the wear of contact wires; work practice of
the staff of the West Siberian railroad] Umen'shenie iz-
nosa kontaktnykh provodov; opyt raboty kollektiva Zapadno-
Sibirskoi dorogi. Moskva, Izd-vo "Transport," 1964. 89 p.
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LATUNIN, Nikolay Ivanovich; OKHOSHIN, Leonid Ivanovich; ZATUCHNYY,
I.M., inzh., retsenzent; KALININ, V.K., kand. tekhn.nauk,
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[Handbook for the electrician of railroad electric power
plants] Spravochnik elektromontera energeticheskogo kho-
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zheldorizdat, 1963. 446 p. (MIRA 17:2)

KALIMAN, V.K., kand. tekhn. nauk, red.

[The VI60 electric locomotive; an instruction book]
Elektrovoz VI60; instruktsionnaya kniga. Moskva,
Transport, 1964. 270 p. (MIRA 17:10)

1. Novocherkasskiy elektrovostrotel'nyy zavod.

KALININ, Vladimir Konstantinovich, kand. tekhn. nauk; MTKHAYLOV, Nikolay Mikhaylovich, kand. tekhn. nauk; DURANDIN, G.B., inzh., retsenzent; ROGOVA, Ye.N., inzh., retsenzent; KRASKOVSKAYA, S.N., inzh., retsenzent; DUBROVSKIY, Z.M., inzh., retsenzent; KALIKHOVICH, V.N., inzh., retsenzent; RAKOV, V.A., red.

[Rolling stock of electric railroads] Elektro-podvizhnoi sostav zheleznnykh dorog. Izd.2., perer. Moskva, Transport, 1964. 498 p. (MIRA 18:1)

KALININ, V.L.

Electric switch panel for drilling rigs. Razved. i okh.nedr
24 no.10:50-51 0 '58. (MIRA 12:2)

1. Belgorodskaya zhelezorudnaya ekspeditsiya.
(Electric switchgear)

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S/126/61/012/004/019/021
E073/E535

AUTHORS: Dunayev, F.N. and Kalinin, V.M.

TITLE: On the longitudinal and transverse magnetostriction of electrical steel

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.4, 1961, 619-620

TEXT: Earlier investigations by V. V. Druzhinin et al. (Ref.1: FMM, 1957, 5, 164; Ref.2: Zavodskaya laboratoriya, 1954, 2, 207) on iron-silicon alloys containing 0.4 to 7.0% Si, using wire strain gauges which were not glued onto the specimens, showed that in most cases the transverse magnetostriction as well as the longitudinal magnetostriction had positive values. The authors of this paper carried out experiments with glued on strain gauges which yielded data differing from those obtained by Druzhinin et al. The measurements were made on 250 x 30 mm² strips and 30-45 mm diameter discs of various steels. To eliminate the influence of possible bending on the measured results, the strain gauges forming the arms of the measuring bridge were glued on in pairs to both sides of the specimen. The

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sensitivity of the metering arrangement was about 10^{-7} mm^{-1} . Magnetization was by means of a solenoid. The main results on the longitudinal and transverse magnetostriction are entered in a table, where λ_{max} is the maximum magnetostriction on the $\lambda(H)$ curve and λ_{\parallel} is the magnetostriction in a magnetic field of 1200 Oe. It can be seen from the table that in the case of the hot-rolled steels Э11 (E11), Э31 (E31), Э42 (E42) and the cold-rolled steel Э310 (E310) the longitudinal magnetostriction λ_{\parallel} and the transverse magnetostriction λ_{\perp} have opposite signs. One of the possible causes why Druzhinin obtained positive values for λ_{\perp} is interaction of the strain gauge wire, along which there is a flow of d.c. current, with the magnetic fields of the electromagnet and the specimen. There are 1 table and 3 references: all Soviet.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet imeni
A. M. Gor'kogo (Ural State University imeni
A. M. Gor'kiy)

SUBMITTED: March 24, 1961

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S/126/61/012/006/019/023
E073/E535

AUTHORS: Dunayev, F.N. and Kalinin, V.M.

TITLE: On the effect of shape in linear magnetostriction

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.6, 1961, 915-917

TEXT: H. E. Stauss (Ref.5: J.Appl.Phys., 1959, 30, 698) has shown that the shape effect for an ellipsoid in a longitudinal uniform field represents deformation by compression and he proposed a formula for calculating the shape effect when magnetizing the specimen above saturation. Stauss has also shown that in the general case the shape effect includes not only the change of the magnitude of deformation of the specimen as a result of interaction of the magnetic poles but also the change in deformation caused by interaction of these poles with the magnetizing apparatus. To determine the effect of shape, the authors used 5 x 5 mm rods, 100 mm long and additional 200 mm rods of the same cross-section and the same material. Specimens of iron with silicon contents of 1.05 and 4.10% were chosen to obtain a low magnetostriction and a sufficiently high saturation

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magnetization; this enabled easier detection of the influence of shape. After machining, the specimens were subjected to high temperature annealing in vacuo at 1100°C for two hours. The linear magnetostriction and the magnetization were measured initially on the 100 mm long specimen on its own and then on this same specimen to which was added the 200 mm long specimen. The magnetostriction was measured by glued-on strain gauges. the magnetization was measured ballistically using a differential coil. The solenoid used had a uniform field for a length of 580 mm and a maximum field strength of 1200 Oe. The results, which are plotted in the paper, indicate that for the specimen containing 1.05% Si, for which the magnetostriction changes from positive to negative, as well as for the specimen containing 4.1% Si, for which the magnetostriction has only positive values, the difference in the magnetostriction values $\Delta A_{||}$ of the short specimen and the specimen with the longer one added is negative for the same value of magnetization. The dependence of $\Delta A_{||}$ on the square of the magnetization I^2 is approximately linear. However, additional investigations are required on this point, since the experimental

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E073/E535

values are such that they would allow plotting a curve which is slightly convex viewed from the I^2 axis. There are 2 figures and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc. The English-language references read as follows: Ref.2: Birss R. Adv.Phys., 1959, 8, No.31, 252; Ref.3: Gersdorf R.J. J.Appl.Phys., 1959, 30, 2018; Ref.4: Gersdorf R. Physica, 1960, 26, 553; Ref.5: Quoted in text,

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo
(Ural State University imeni A. M. Gor'kiy)

SUBMITTED: May 10, 1961

Card 3/3



DUNAYEV, F.N.; KALININ, V.M.

Longitudinal and transverse effect of the shape of ellipsoid
specimens of iron-silicon alloys. Fiz.met.i metalloved. 13
no.1:153-154 Ja '62. (MIRA 15:3)

1. Ural'skiy gosudarstvennyy universitet imeni Gor'kogo.
(Iron-silicon alloys--Testing)

DUNAYEV, F.N.; KALININ, V.M.

Effect of the longitudinal and transverse shape on the magneto-
striction of iron ellipsoids. Fiz. met. i metalloved. 14 no.3:
462-464 S 162. (MIRA 15:9)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo.
(Magnetostriction)

DUNAYEV, F.N.; KALININ, V.M.; SERIKOV, V.V.

Anisotropy of volumetric magnetostriction. Fiz.met. i metalloved.
14 no.5:781-783 N '62. (MIRA 15:12)

1. Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo.
(Magnetostriction)

S/126/63/015/002/033
E039/E420

AUTHORS: Dunayev, F.N., Kalinin, V.M.

TITLE: Volume magnetostriction of iron and iron-silicon alloys

PERIODICAL: Fizika metallov i metallovedeniye, v.15, no.2, 1963,
170-174

TEXT: An experimental investigation of the dependence of volume magnetostriction on composition for Si content from 0 to 6.79% by weight. Experimental data on the magnitude, sign and characteristics of the change in volume magnetostriction provide valuable information on magnetic and exchange interactions in ferromagnetics. Samples are prepared in the form of ellipsoids of revolution with major axes of about 150 mm and minor axes of about 5 or 10 mm, giving volumes of about 2300 and 7700 mm³ respectively. All samples were heated at 900°C in a vacuum for 3 hours and then cooled at 100°C per hour. The volume magnetostriction was measured by a dilatometric method using distilled water as the dilatometer fluid. Fields of up to 5000 Oe were provided by means of a solenoid and errors of measurement were about 5%. It is shown that the volume magnetostriction ω depends linearly on the field H for Fe and Fe-Si alloys over the

Card 1/2

Volume magnetostriction ...

S/126/63/015/002/002/033
E039/E420

range 600 to 5700 Oe. Over the investigated range the value of $\partial \omega / \partial H$ increases with increase in Si content from $6.4 \times 10^{-10} \text{ Oe}^{-1}$ for pure iron, to $13 \times 10^{-10} \text{ Oe}^{-1}$ for the alloy with 6.79% Si. The isotropic constant for true magnetostriction is calculated and varies from 2.13×10^{-10} for pure iron to 4.33×10^{-10} for the 6.79% Si alloy. The dependence of $\partial \omega / \partial H$ on Si content is due to the increase in the critical exchange integral. Over the investigated range the points for the Fe-Si alloys are displaced to the left of the Bethe-Slater curve. There are 2 figures and 1 table.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo
(Ural State University imeni A.M.Gor'kiy)

SUBMITTED: June 30, 1962

Card 2/2

DUNAYEV, F.N.; KALININ, V.M.; DRUZHININ, V.V.

Longitudinal and transverse magnetostriction of iron-silicon
steels. Fiz. met. i metalloved. 15 no.5:652-657 My '63.
(MIRA 16:8)

1. Ural'skiy gosudarstvennyy universitet im. Gor'kogo i
Verkh-Issetskiy metallurgicheskiy zavod.

(Iron-silicon alloys—Magnetic properties)

ADAMESKU, R.A.; KALININ, V.M.; KUDRYAVTSEV, I.P.

Effect of annealing in a magnetic field on the magnetic and
crystalline structure of ferrosilicon. Izv. vys. ucheb. zav.;
fiz. no.5:69-74 '64. (MIRA 17:11)

1. Ural'skiy politekhnicheskii institut imeni Kirova i Ural'skiy
gosudarstvennyi universitet imeni Gor'kogo.

L 62911-65 EWT(m)/EWF(w)/EWA(d)/EWP(t)/EWP(z)/EWP(b) JD/2

ACCESSION NR: AR5019140

UK/0137/65/000/007/1026/1028

SOURCE: Ref. zh. Metallurgiya, Abs. 71169

AUTHOR: Dunayev, F. N.; Kalinin, V. M.

TITLE: Longitudinal, transverse, and volumetric effect of the shape of ferromagnetic materials

CITED SOURCE: Sb. Fiz. magnitn. yavleniy. Sverdlovsk, 1964, 57-76

TOPIC TAGS: ferromagnetic material, polycrystal, compressive stress, tensile stress, external magnetic field, homogeneous magnetic field

TRANSLATION: The longitudinal effect of the shape ΔA_{11} of polycrystalline ferromagnetic materials in a homogeneous external magnetic field consists of compression strain, and not of dilatational strain. For determination of the magnitude of the spontaneous longitudinal magnetostriction in samples with a sufficiently large demagnetization factor, it is necessary not to calculate, but to add the value of ΔA_{11} to the measured magnitude of λ_{11} . The transverse effect of

Card 1/2

L 62914-65

ACCESSION NR: AR5019140

the shape ΔA_{22} of polycrystalline ferromagnetic materials consists of dilatational strain. To determine the magnitude of the spontaneous transverse magnetostrictive effect from the measured value of $\lambda_{\perp s}$, it is necessary to calculate ΔA_{22} . The volumetric effect of the shape of polycrystalline samples consists of expansion strain. The longitudinal effect of the shape of a sample located between the poles of an electromagnet changes its sign with a change in the distance between the samples and the poles. With small gaps, this effect consists of dilatational strain, while with large gaps it consists of compression strain. (From RZh Fiz.)

SUB CODE: MM

ENCL: 00

Card ^{dim} 2/2

L 23679-66 EWT(1)/EWT(m)/EWA(d)/EWP(t)/EWP(k) IJP(c) JD/HW

ACC NR: AR6005239

SOURCE CODE: UR/0158/65/000/009/2134/E135

SOURCE: Ref. zh. Fizika, Abs. 9E1111

AUTHORS: Dunayev, F. N.; Kalinin, V. M.; Maysinovich, V. I.

TITLE: Anisotropy of longitudinal, transverse, and volume shape effect

REF SOURCE: Sb. Fiz. magnitn. yavleniy. Sverdlovsk, 1964, 77-85

TOPIC TAGS: magnetostriction, steel, material deformation, magnetic anisotropy/ E310 steel

TRANSLATION: With the aid of the method of strain-gauge pickups, the authors investigated the longitudinal and transverse magnetostriction $\lambda_{||}$ and λ_{\perp} of single crystals of cold-rolled steel E310. It is established that with decreasing diameter of a sample prepared in the form of a disc whose surface coincides with the (110) plane, i.e., with increasing demagnetizing factor, the magnetostriction $\lambda_{||}$ in the [100] direction, which has a positive sign, decreases for each value of the field H, i.e., the disc experiences compression deformation, due to the shape effect, in the direction of the field H. However, the variation of $\lambda_{||}$ can be also influenced by the change in the magnetic structure. The magnetostriction λ_{\perp} in the [100] direction has a negative sign and it also decreases in absolute magnitude with decreasing diameter. In the [110] direction, the value of $\lambda_{||}$ is also positive and also decreases with decreasing diameter, whereas λ_{\perp} , which has a negative sign, increases in absolute magnitude. In the [111] direction, $\lambda_{||}$ and λ_{\perp} are negative and decrease in absolute magnitude with

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L 23679-66

ACC NR: AR6005239

decreasing diameter. The volume magnetostriction ω depends on the direction of the magnetic field H relative to the rolling direction (the $[100]$ direction). In the initial section the $\omega(H)$ curves have a parabolic form. The greatest deformation of the sample for a given value of the field H is absorbed in the case of magnetization along $[100]$, and the smallest in the case of magnetization along $[111]$. For fields up to 400 oe, a ratio $\omega[100]:\omega[110]:\omega[111] = 3:2:1$ is observed, and is explained on the basis of the theory of R. Becker (Z. Phys., 1934, 87, 547). N. Smol'kov.

SUB CODE: 20

Card 2/2 *fv*

L 23680-66 EWT(1)/EWT(m)/EWA(d)/ENP(t)/ETP(k) IJP(c) JD/HW

ACC NR: AR6005240 SOURCE CODE: UR/0058/65/000/009/E135/E135

AUTHORS: Dunayev, F. N.; Kalinin, V. M.; Maysinovich, V. I. SS
SY

TITLE: Crystalline effect and exchange magnetostriction of the
paraprocess in iron-silicon alloys B

SOURCE: Ref. zh. Fizika, Abs. 9E1112

REF. SOURCE: Sb. Fiz. magnitn. yavleniy. Sverdlovsk, 1964, 86-99

TOPIC TAGS: paramagnetism, magnetostriction, iron alloy, silicon
containing alloy, magnetic anisotropy, heat treatment, steel/E310
steel

TRANSLATION: The authors investigated the volume magnetostriction
in the region of the crystalline effect (ω_c) and of the paraprocess
(ω_p) of polycrystalline samples of cold rolled E310 steel with tex-
ture (110) [001]. The polycrystalline samples had the form of ellip-
soids of revolution and plates, whose shape ensured homogeneous mag-
netization in a homogeneous magnetic field. All the samples were
annealed in vacuum of 10^{-4} mm Hg at 900C for four hours with subse- Z

Card 1/3

L 23680-66

ACC NR: AR6005240

quent cooling at a rate of $50^{\circ}/\text{hr}$. The value of ω was determined by a dilatometric method. The sensitivity of the installation in measurement of ellipsoidal samples was 5×10^{-8} , and that of the plates was 1.8×10^{-8} . The magnetization was carried out in a solenoid, which made it possible to obtain a magnetic field up to 6000 Oe, uniform within 5% in a section 150 mm long. The measurement error was 2 -- 5%. It is shown that $\partial\omega_p/\partial H$ increases with increasing Si content from 6.4×10^{-10} for Fe to 13×10^{-10} Oe $^{-1}$ for an alloy containing 6.79% Si. This is brought about by the fact that the 'slope' of the effective exchange integral essentially increases, apparently because of the decrease in the lattice parameter with increasing Si content. ω_c of cold rolled steel was investigated. The largest value of ω_c was observed in the $[111]$ direction, and the smallest in the $[100]$ direction. Measurement of ω_c of single crystals make it possible to determine the value of $(K_1)^{-1} \partial K_1 / \partial P$ which characterizes the change in the magnetic anisotropic constant

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2/3

L 23680-66

ACC NR: AR6005240

during hydrostatic compression. For an alloy with 3.2% Si,
 $(1/K_1)\partial K_1/\partial P \approx -70 \times 10^{-7} \text{ atm}^{-1}$. An anisotropy of ω_p is observed.
Yu. Avraamov.

SUB CODE: 20

Card

3/3 FV

DUNAYEV, F.N.; KALININ, V.M.; MAYSHOVICH, V.I.

Anisotropy of the crystal effect of the volume magnetostriction
in the spin paramagnetism of iron-silicon alloys. Fiz. met. i
metalloved. 18 no.2:318-320 Ag '64.

(MIRA 18:8)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Ger'kogo.

KALININ, V.M.

Calculation of sums, integralov, and products. Vest LGU no.7:63-67
'65. (MIRA 18:5)

DUNAYEV, F.N.; KALININ, V.M.; KRYUKOV, I.P.; MAY SINOVICH, V.I.

Magnetization saturation of the Co-Pt alloy. Fiz. met. i
metalloved. 20 no.3:460-462 S '65.

(MIRA 18:11)

1. Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo
i Institut fiziki metallov AN SSSR.

L 46286-66 ENT(m)/ENT(t)/ETI IJP(c) JD/HW/JQ

ACC NR: AP5025335

SOURCE CODE: UR/0126/65/020/003/0460/0462

AUTHOR: Dunayev, F. N.; Kalinin, V. M.; Kryukov, I. P.; Maysinovich, V. I.

ORG: Ural State University im. A. M. Gor'kiy (Ural'skiy gosuniversitet); Institute of Physics of Metals, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: The magnetic saturation intensity of Co-Pt alloy

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 3, 1965, 460-462

TOPIC TAGS: cobalt alloy, platinum alloy, magnetic saturation, *TEMPERATURE DEPENDENCE*

ABSTRACT: The thermal dependence of the specific magnetic saturation intensity of a Co-Pt alloy of nearly equiatomic composition was determined from liquid nitrogen temperature to 700K, in order to study the nature of the high coercivity of such magnets. Spherical samples of 3.8 mm diam were prepared. Their specific magnetic saturation intensity was measured after 30 min heating at 1000C, cooling at a rate of 1.3C/sec, and annealing 3, 6, 9, or 13 hr at 600C using fields up to 80kOe for magnetization. The specific magnetic saturation intensity increased with field strength and decreased with annealing time and with the temperature at magnetization, reaching a maximum of 43.5 G·cm³·g⁻¹ for tempered and not annealed samples. The results indicate that magnetization of the tetragonal and well defined phase, formed during

Card 1/2

UDC: 538.114.245

L 16286-66

ACC NR: AP6025028

the annealing process, is 35—40% lower than that of the cubic disordered phase generated at 850C and higher temperatures. The authors thank R. Z. Levitin for making available information on the method of measuring magnetization in pulse fields before its publication. Orig. art. has: 3 figures.

SUB CODE: 11,20/ SUBM DATE: 21Aug64

/ ORIG REF: 004/ OTH REF: 002

65
Card 2/2

1.035.7-62 EEP(m)/EEP(t)/EP1 1JP(c) JD

ACC NR AR6033793

SOURCE CODE: UR/0058/66/000/007/E110/E110

3/

AUTHOR: Mishin, D. D.; Novikov, V. F.; Kalinin, V. M.

TITLE: The coercive force of plastically deformed ferrosilicon crystals

SOURCE: Ref. zh. Fizika, Abs. 7E830

REF SOURCE: Uch. zap. Ural'skogo un-ta. Ser. fiz., vyp. 1. 1965, 63-68

TOPIC TAGS: iron, silicon single crystal, plastic deformation, ferrosilicon, anisotropy

ABSTRACT: The anisotropy of the coercive force H_c and the magnetostriction saturation λ_s of Fe-Si single crystals deformed by stretching in the direction $[110]^s$ ($[110]$) was investigated. Research was conducted on disk-shaped samples. H_c measurements were made in three basic crystallographic directions on an astatic magnetometer with a 700-erg magnetizing field. Tensometric measurements were made of λ_s in fields of up to 1900 erg. Measurements showed that plastic deformation of Fe-Si single crystals in the direction $[110]$ ($[110]$) causes a quantitative change in the H_c value and a qualitative change in the H_c anisotropy. The inequality of H_c is fulfilled in the 0--92%

range. The inequality of H_c is fulfilled for
Card 1/2

L 08327-67

ACC NR:

AR6033793

0

9.2—23% deformation. When deformation exceeds 23%, the first correlation enters into effect. From the results of measurements, it follows that the process of change of H_c depends essentially on the direction of deformation. P. Khramov. [Translation of abstract]

SUB CODE: 08, 20/

Card 2/2 nst

L 17831-66 EWT(d)/T IJP(c)
ACC NR: AP6004383

SOURCE CODE: UR/0020/66/166/003/0530/0532

AUTHOR: Kalinin, V. M.

ORG: none

TITLE: Asymptotic expansions for frequently encountered probability distributions

SOURCE: AN SSSR. Doklady, v. 166, no. 3, 1966, 530-532

TOPIC TAGS: asymptotic expansion, probability, distribution function, normal distribution, polynomial

ABSTRACT: The problem of refining the limit theorems on the convergence of binomial and polynomial distributions to normal and Poisson, Student distributions to normal, etc., is formulated. Let $\lambda_1, \dots, \lambda_{k-1}$ be fixed positive numbers; m_1, \dots, m_{k-1} fixed nonnegative integers; $\lambda = \lambda_1 + \dots + \lambda_{k-1}$, $m = m_1 + \dots + m_{k-1}$, $m_k = n - m$. Then for any $k = 2, 3, \dots$ the asymptotic expansion

$$\frac{n!}{m_1! \dots m_k!} (\lambda_1/n)^{m_1} \dots (\lambda_{k-1}/n)^{m_{k-1}} (1 - \lambda/n)^{m_k} =$$

$$= \left(\prod_{i=1}^{k-1} \frac{\lambda_i^{m_i} e^{-\lambda_i}}{m_i!} \right) \exp \left[\sum_{j=1}^{\infty} \frac{\mathcal{L}_j(m, \lambda)}{n^j} \right] = \left(\prod_{i=1}^{k-1} \frac{\lambda_i^{m_i} e^{-\lambda_i}}{m_i!} \right) \left[1 + \sum_{j=1}^{\infty} \frac{\mathcal{L}_j(m, \lambda)}{n^j} \right]$$

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L 17831-66
ACC NR: AP6004383

is valid when $n \rightarrow \infty$. Let λ be a fixed positive number, and m be a fixed nonnegative integer. The asymptotic expansion

$$\sum_{i=0}^m C_n^i \left(\frac{\lambda}{n}\right)^i \left(1 - \frac{\lambda}{n}\right)^{n-i} = F(m) + \sum_{j=1}^{\infty} \frac{V_j(m, \lambda)}{n^j}$$

is valid when $n \rightarrow \infty$. When $\lambda \rightarrow \infty$, in any finite interval $a \leq y \leq b$:

$$\frac{\lambda^m e^{-\lambda}}{m!} = \frac{e^{-y/n}}{\sqrt{2\pi n}} \exp \left[\sum_{j=1}^{\infty} \frac{W_j(y)}{(V\lambda)^j} \right].$$

Uniformly for all m , for which y_1 are within arbitrary finite intervals $a_1 \leq y_1 \leq b_1$, when $n \rightarrow \infty$

$$\frac{n!}{m_1! \dots m_k!} p_1^{m_1} \dots p_k^{m_k} = \frac{\exp \left[-\frac{1}{2} \sum_{i=1}^k q_i y_i^2 \right]}{(V 2\pi n)^{k-1} \sqrt{p_1 \dots p_k}} \exp \left[\sum_{j=1}^{\infty} \sum_{i=1}^k \frac{G_{ij}}{(V n p_i)^j} \right].$$

For $k = 2$,

$$\begin{aligned} C_n^m p^m q^{n-m} &= \frac{e^{-y/n}}{\sqrt{2\pi n p q}} \exp \left[\sum_{j=1}^{\infty} \frac{G_j(y)}{(V n p q)^j} \right] \\ &= \frac{e^{-y/n}}{\sqrt{2\pi n p q}} \left[1 + \sum_{j=1}^{\infty} \frac{T_j(y)}{(V n p q)^j} \right]. \end{aligned}$$

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L 17831-66

ACC NR: AP6004383

When $n \rightarrow \infty$, at an arbitrary fixed θ uniformly relative to $a \leq y_1 \leq y_2 \leq b$

$$\sum_{i=-r+1}^{n+m} C_n^i p^i q^{n-i} = \int_{y_1}^{y_2} \varphi(y) dy + \sum_{j=1}^{\infty} \frac{Q_j}{(V n p q)^j} :$$

Uniformly relative to y in any finite interval $a \leq y \leq b$

$$\frac{\Gamma((n+1)/2)}{V \pi n \Gamma(n/2)} (1 + y^2/n)^{-\frac{n+1}{2}} = \varphi(y) \exp \left[\sum_{j=1}^{\infty} \frac{K_j(y)}{n^j} \right] =$$

$$= \varphi(y) \left[1 + \sum_{j=1}^{\infty} \frac{P_j(y)}{n^j} \right],$$

where

$$K_j(y) = \frac{(-1)^j}{2} \left(\frac{y^{2j}}{j} - \frac{y^{2j+2}}{j+1} \right) - \frac{2^{j+1}-1}{j(j+1)} B_{j+1},$$

$$P_j(y) = \sum \frac{K_1^{v_1}(y) \dots K_j^{v_j}(y)}{v_1! \dots v_j!}$$

is an even polynomial of degree $4j$. This paper was presented by academician Yu. V. Linnik on 10 May 1965. Orig. art. has: 16 formulas.

SUB CODE: 12/ SUBM DATE: 07May65/ ORIG REF: 003/ OTH REF: 003

Card 3/3

L 01181-66 ENT(d)/T IJP(c) JXT(cz)

ACCESSION NR: AT5018590

UR/2517/65/079/000/0182/0197

AUTHOR: Kalinin, V. M. 44.55

TITLE: Functionals connected with the Poisson distribution and the statistical structure of a text

SOURCE: AN SSSR. Matematicheskii institut. Trudy, v. 79, 1965. Raboty po matematicheskoy statistike i teorii veroyatnostey (Papers on mathematical statistics and the theory of probability), 182-197

TOPIC TAGS: statistical analysis, probability theory, language, Poisson distribution

ABSTRACT: It is assumed that a text (speech sample) is a discrete, stationary, random process. A text of N words is characterized by the following functionals: $n(N)$ is the number of different words; $n(m, N)$ is the number of different words, each of which is used m times; $r_m(N)$ is the number of different words, each of which is used more frequently than m times. The author is characterized by the collection of word-usage probabilities p_i ($i = 1, \dots, L$), where L is the capacity of the author's active vocabulary for the given text. The following three problems

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L 01481-66

ACCESSION NR: AT5018590

are considered: 1) from the functionals of a text of N_0 words to find the functionals of a text of length N (words); 2) to find the functionals of a text from the characterization of the author; 3) to determine the characterization of the author from the functionals of the text. It is assumed that word frequency follows the Poisson distribution and that the word probabilities agree with Zipf's harmonic law or with Mandelbrot's "canonical" law. The rank i of a word is its number in a list of words according to decreasing probabilities. The list is called a probability dictionary. The mathematical expectations of these functionals are derived to solve these problems. A linguistic interpretation is given, and experimental results are displayed for a sample text. Orig. art. has: 86 formulas, 9 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MA, DP

NO REF SOV: 003

OTHER: 004

Card 2/2

83343

S/024/60/000/006/010/015
E031/E413

16.9.500 (1031,1121,1132)

AUTHORS: Kalinin, V.N. and Makar'yev, B.M. (Leningrad)
TITLE: The Investigation of Free Oscillations in Non-Linear Automatic Control Systems Using Logarithmic Frequency Characteristics

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, No.6, pp.157-161

TEXT: The elements of the system may be linear (L), non-linear (N) or complicated non-linear elements (K). The investigation is made considering the characteristics as two families of either the amplitude or the frequency for fixed values of the other parameter. Consider first auto-oscillations in a system formed by short-circuiting the K element. On the logarithmic scale, the transfer function splits into two parts and these two equations for the parameters of the auto-oscillations are solved graphically. The stability of the auto-oscillations is determined using the Nyquist criterion. The second case considered is that of a system of the form KL. Again a graphical approach is adopted. This case is of interest because it is equivalent to a system comprising a linear and a non-linear part. The third and last case is that of a
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88343

S/024/60/000/006/010/015

E031/E413

The Investigation of Free Oscillations in Non-Linear Automatic Control Systems Using Logarithmic Frequency Characteristics

system of the form NL. For convenience the non-linear elements are divided into those with and those without hysteresis loops in their characteristics. The necessary conditions for the occurrence of auto-oscillations is the existence of general points on the curves of the logarithmically equivalent admittance and characteristic functions of the system. If these general points do not exist, this can be regarded as a sufficient condition for the absence of auto-oscillations. Systems with non-linear elements of the first class are more inclined to self-excitation than systems with elements of the second class. There are 4 figures and 2 Soviet references.

SUBMITTED: May 24, 1960

Card 2/2

AVDEYEV, A.I.; KALININ, V.N.; FRIDZON, M.V.

Protection of thermoreceivers from the thermal action of solar
radiation when measuring temperature at great heights. Trudy
TSAO no.41:86-90 '62. (MIRA 16:10)

I. 10485-63

EWI(d)/BDS--AFTTC/APGC/ASD--Pg-4/Pk-4/Pl-4/Pn-4/Pq-4--BC/IJP(C)

ACCESSION NR: AP3000286

S/0020/63/150/001/0021/0022

74

AUTHOR: Kalinin, V. N. (Moscow)

TITLE: The existence of an absolute minimum in a problem of the theory of optimal processes

SOURCE: AN SSSR. Doklady, v. 150, no. 1, 1963, 21-22

TOPIC TAGS: optimal process, quasi-regularity, absolute minimum, functional quasi-regularity

ABSTRACT: Definitions of the class U of allowable controls $u(t)$, of the class Δ of operations $A(u, x)$ determining the controlled process, and of the resolvent of an operation are given, and the problem of the optimal control is formulated. The following functional is assumed:

$$I(u) = \int_0^{\tau} f(x, u, t) dt,$$

where $f(x, u, t)$ is a function for which the integral (1) exists (in the sense of Lebesgue) and is bounded and unique for any allowable control function $u \in U$ and

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L 10485-63

ACCESSION NR: AP3000286

for corresponding controlled processes x . It is necessary to establish conditions under which there exists in the class of allowable functions $u(t)$ a control function $u^*(t)$ (optimal control) such that the absolute minimum of the function $I(u)$ is ensured. The definition of the quasi-regularity of the function $I(u)$ in the class U is presented in the form of certain constraints upon the integrand $f(x, u, t)$, and optimality conditions are expressed in the following theorem: If the operation $A(x, t)$ belongs to the set Δ_0 , where Δ_0 is the set of operations with a strengthened continuous resolvent, and the functional $I(u)$ is quasi-regular in U , then a control $u^*(t)$ exists in U such that the absolute minimum of the functional $I(u)$ is ensured. The article was presented by Academician L. S. Pontryagin, 23 November 1962. Orig. art. has: 3 formulas.

ASSOCIATION: none

SUBMITTED: 23Nov62

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: M4

NO REF SOV: 002

OTHER: 001

85/94
Card 12/2

L 55890-65 EWT(1)/EWT(m)/ECC/ENG(v)/EEC-4/EMP(1)/EEC(t)/EWA(1) P-4/Pc-4/
Fe-5/Pc-4/Pac-2/Peb/Pi-4 RM/GW

UR/0169/65/000/005/B010/B011
551.508

ACCESSION NR: AR5014437

SOURCE: Ref. zh. Geofizika, Abs. 6B82

AUTHOR: Avdeyev, A.I.; Fridzon, M.B.; Kalinin, V.N.

TITLE: The protection of temperature sensors against radiation.

CITED SOURCE: Sb. 150 let Meteorol. observ. Kazansk. un-ta. Kazan', Kazansk. un-t.,
1963, 200-212

TOPIC TAGS: meteorological instrument, temperature sensor, stratosphere, anti-
radiation coating, radiation error, silver passivation, silver reflectivity, lacquer
coating, aluminum reflectivity

TRANSLATION: Silver applied to a polished base has the best reflecting properties
of all the coverings used for the protection of stratospheric temperature sensors against
of all the coverings used for the protection of stratospheric temperature sensors against
of all the coverings used for the protection of stratospheric temperature sensors against

make its use highly promising, ...
large scale. M. Kaganov.

SUB CODE: ES ENCL: 00

COC
Card 2/2

L 17074-63 EPA(b)/EWT(1)/FCC(w)/FS(v)+2/BDS/ES(v) AFFTC/AFMDC/
 ESD-3/APGC/SSD Pd-4/Pg-4/Po-4/Pe-4/Pq-4 GW
 ACCESSION NR: AT3006850 S/2560/63/000/016/0238/0245

AUTHOR: Kalinin, V. N.

TITLE: Equations of motion of an artificial earth satellite

SOURCE: AN SSSR. Iskusst. sputniki Zemli, no. 16, 1963, 238-245

TOPIC TAGS: orbital motion equation, artificial earth satellite, Coriolis acceleration theorem, controlled satellite motion, central gravity field, automatic rendezvousing

ABSTRACT: The derivation of exact equations for a controlled orbital motion of an artificial earth satellite (e.g., automatic rendezvousing or another maneuver in close vicinity of the orbit) in a central field of gravitation is presented. A moving coordinate system connected with an earth-centered elliptical orbit is utilized. The Coriolis theorem on the total acceleration of a mass point is used to derive the equations of satellite motion and a system of differential equations for acceleration components.

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L 17074-63

ACCESSION NR: AT3006850

5
An approximate integration of these equations by applying the small-parameter method is briefly discussed. "The author expresses his profound gratitude to F. M. Kilin, B. I. Solomatnikov, A. V. Chetkov, Ye. P. Grigor'yev, and Yu. Ya. Dmitriyev for valuable remarks made during the discussion of the article." Orig. art. has: 2 figures and 46 formulas.

ASSOCIATION: none

SUBMITTED: 15Jul62

SUB CODE: AS

DATE ACQ: 08Aug63

NO REF SOV: 001

ENCL: 00

OTHER: 002

Card 2/2

L 16049-65 EWT(d)/EWP(1) Po-4/Pq-4/Pg-4/Pu-4/Pk-4/P1-4 LJP(c) MW/BC
 S/0280/64/000/005/0039/0044
 ACCESSION NR: AP4048822

AUTHOR: Kalinin, V. N. (Leningrad)

TITLE: Theory of the approximate synthesis of an optimum control

SOURCE: AN SSSR. Izv. Tekhnicheskaya kibernetika, no. 5, 1964, 39-44

TOPIC TAGS: optimum control synthesis, approximate synthesis, linear control system, time optimum control

ABSTRACT: An approximate method is presented for the synthesis of the time optimal control system described by the linear differential equation of the form

$$\dot{x} = a(\epsilon, t)x + bu, \quad (1)$$

where x is an n -vector of the phase state of the system, u is an r -control vector, $a(\epsilon, t)$ is an $n \times n$ matrix, b is a constant $n \times r$ matrix, and ϵ is a small parameter. The essence of the method

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L 16049-65

ACCESSION NR: AP4048822

consists of the approximate substitution and of a more simple auxiliary problem for the original problem and in estimating the error of approximation. The synthesis of the optimal control system described by the degenerate equation (1) when $\epsilon = 0$ is taken as an auxiliary problem. Assuming that the solution of the auxiliary problem is known, it is shown how this solution can be continued into the domain of nonzero ϵ values. The approximate structure of the controller is presented, and the estimate of the deviation of the control system with the derived controller from the optimal one is derived. An example of the synthesis of a time-optimal second-order control system illustrates the method. Orig. art. has: 5 figures and 31 formulas.

ASSOCIATION: none

SUBMITTED: 15Jan64

NO REF SOV: 006

ENCL: 00

OTHER: 001

SUB CODE: IE, MA

STD PRESS: 3141

Card 2/2

RAJININ, V.I.

Case of dermoid cyst of the liver. Vest. rent. i rad. 39 no.5:
(S-63 S-0 '64. (MIRA 18:3)

1. Kafedra propedevticheskoy terapii (zav. - prof. Y.V. Sherdin)
Volgogradskogo meditsinskogo instituta i rentgenologicheskoye
otdeleniye (zav. V.K. Strelyukhin) Volgogradskoy oblasti klinicheskoy bol'nitsy.

L 41040-65 EWT(d)/EPF(n)-2/EMP(1) Po-4/Pq-4/Pg-4/Pu-4/Pk-4/P1-4 IJP(a) 011/110
 S/0103/65/026/002/0345/0349
 ACCESSION NR: AP5006287

AUTHOR: Kalinin, V. N. (Leningrad)

TITLE: Generalized optimality criteria in optimal-control problems

SOURCE: Avtomatika i telemekhanika, v. 26, no. 2, 1965, 365-369

TOPIC TAGS: optimal control, optimality, automatic control, automatic control design, automatic control system, automatic control theory

ABSTRACT: Optimality criteria are considered which are based on the minimization of functions of several conventional integral functionals in a nonclassic variant of the optimal-control problem. The technique of double minimization based on consideration of an isoperimetric problem is set forth for this functional:

$$J = F(\xi_1, \dots, \xi_n),$$

where

$$\xi_k = \int_0^T \varphi_k(x, u) dt \quad (k = 1, \dots, n).$$

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L 41040-65

ACCESSION NR: AP5006287

and F is the defined function. The optimality criterion connected with the above functional is called the "generalized optimality criterion." This theory is used to find the optimum control for a simplest second-order plant. Orig. art. has: 3 figures and 35 formulas.

ASSOCIATION: none

SUBMITTED: 22Aug63

NO REF SOV: 003

ENCL: 00

OTHER: 000

SUB CODE: IE, JIP

llc
Card 2/2

ZAKHARKIN, L.I.; KALININ, V.N.

Reaction of amines with barenes, Izv. AN SSSR. Ser. khim. no.3:
579 '65. (MIRA 1845)

1. Institut elementoorganicheskikh sovedinoniy AN SSSR.

ZAKHARKIN, L.I.; KALININ, V.N.

Sequence of substitution in electrophilic halogenation of barenes
(carboranes). Izv. AN SSSR. Ser. khim. no.7:1311 '65. (MIRA 18:7)

1. Institut elementoorganicheskikh sovedineniy AN SSSR.

L 58347-65 ENT(m)/EPF(c)/EPR/EPF(j)/EWA(c) Pc-4/Pr-4/Ps-4 RPL NW/JH/RH

UR/0020/65/163/001/0110/0112

ACCESSION NR: AP5016083

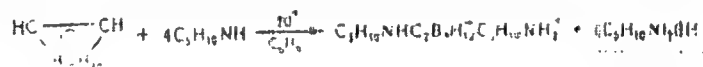
AUTHOR: Zakharkin, L. I.; Kalinin, V. N.

TITLE: Conversion of barenes with amines into salts of dicarbaundecaborane derivatives

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 110-112

TOPIC TAGS: barene, borane, dicarbaundecaborane, organoboron

ABSTRACT: Contrary to the findings of some U.S. investigators, it was found that amines react with barenes to form salts of dicarbaundecaborane derivatives. The reaction involves cleavage of the barene ring. Thus, barene reacts with piperidine to form an adduct of piperidine with the piperidinium salt of dicarbaundecaborane:



Monosubstituted and disubstituted barenes react similarly with piperidine in benzene or hexane. Unsymmetrically substituted barenes yield only one anion; this indicates that the boron atom is abstracted from a definite position in the barene molecule, located symmetrically with respect to both carbon atoms. Orig. art. has: 2 figures and 1 formula. [VS]

Card 1/2

L 58347-65
ACCESSION NR: AP5018083

ASSOCIATION: Institut elementorganicheskikh sovedineniy Akademii nauk SSSR
(Institute of Organoelemental Compounds, Academy of Science, SSSR)

SUBMITTED: 31Dec64

ENCL: 00

SUB CODE: OC, Ge

NO REF SOV: 002

OTHER: 005

ATD PRESS: 4042

Card *7R*
2/2

BAKHAROV, L.I.; KALININ, V.N.; FODVISOVSKAYA, L.S.

Preparation of B-hydroxybarynes by the action of nitric acid
on barynes. Izv. AN SSSR. Ser. khim. no.9:1711 1965.
(MIA 18:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

ZAKHARKIN, I.I. & YALVININ, V.N.

Cleavage of phenylneobarene by hydrazine into a phenylneo-
dicarbaundecarborane anion. Zhur. ob. khim. 35 no.9:1691-
1692 S '65.

(NERA 18:10)

L 2558-66 EWT(m)/EPF(c)/EWP(j)/EWA(c) RPL JW/RM

ACCESSION NR: AP5025131

UR/0079/65/035/010/1882/1884
347.244

AUTHOR: Zakharkin, L. I.; Kalinin, V. N.

TITLE: Synthesis of carboran- and neocarboran-amines

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1882-1884

TOPIC TAGS: carborane, neocarborane, amine

ABSTRACT: Carboran- and neocarboran-amines with the NH_2 -group at one of the C atoms of the carborane- or neocarborane ring have been synthesized for the first time. The synthesis proceeds in two steps: treatment of the respective and chlorides with sodium-azide and heating of the azides formed with concentrated sulfuric acid. Carboran- and neocarboran-amines are soluble in concentrated H_2BO_4 . Carboranamines are weak bases due to the electron acceptor effect of the carborane ring and to steric factors. Orig. art. has: 1 table.

[B0]

ASSOCIATION: none

SUBMITTED: 15Mar65

NO REF SOV: 000

Card 1/1 *ry*

ENCL: 00

OTHER: 000

SUB CODE: QC.GC/
ATD PRESS: *4108*

L 18569-66 EWT(m)/EAP(j)/T WW/JW/JWD/RM

ACC NR: AP6002702

SOURCE CODE: UR/0062/65/000/012/2206/2209

AUTHORS: Zakharkin, L. I.; Kalinin, V. N.

ORG: Institute for Heteroorganic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soedineniy Akademii nauk SSSR) 38

TITLE: Certain rearrangements of phenylborane and phenylneoborane 1.44.55

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 12, 1965, 2206-2209 11

TOPIC TAGS: borane, boron compound, organoboron compound

ABSTRACT: A number of substituted phenyl and neophenyl boranes were synthesized to extend the work of L. I. Zakharkin, V. I. Stanko, and A. I. Klimova (Zh obshch. khimii 35, 394, 1965) on the properties of boranes and neoboranes. The reaction yield, melting points, and UV spectra of ethanol solution of the synthesized compounds were determined. The experimental results are presented in graphs and tables (see Fig. 1).

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UDC: 542.91+661.718.4